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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,167	06/20/2003	Miguel Angel Olin-Nunez	206,160	7644

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EXAMINER

HUG, ERIC J

ART UNIT PAPER NUMBER

1731

DATE MAILED: 04/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/601,167	<b>Applicant(s)</b> OLIN-NUNEZ ET AL.	
	<b>Examiner</b> Eric Hug	<b>Art Unit</b> 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2003 and 16 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Step (d) of claim 1 recites “counteracting negative effects in the glass and the glass melting furnace while maintaining a controlled relation between the pulverized fuel being supplied to each of the burners to ensure stability of said glass and said glass melting furnace;”.

The underline phrases render the claim indefinite, because it is uncertain which negative effects are being counteracted and what constitutes stability of the glass and the furnace. It is also uncertain whether “counteracting” recites an active method step, or whether it is a result of maintaining a controlled relation between the pulverized fuel being supplied to each of the burners.

***Allowable Subject Matter***

Claims 1-5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose or suggest producing glass in a glass melting furnace using combustion of pulverized fuel, whereby a fuel and air/gas feeding means comprises at least the features of steps a) and b), and whereby the furnace comprises a plurality of burners operating in alternate cycles, and whereby the fuel is burned in a glass melting region of the furnace, and also whereby erosive and abrasive effects of the pulverized fuel are counteracted by selection of the refractory materials of step (e).

The prior art teaches means of using pulverized fuel to melt glass, and separately teaches means of delivering pulverized fuel to combustion-type furnaces having a plurality of burners, but there is no teaching or suggestion for utilizing solid fuels in at least the manner described above to melt glass raw materials in a glass melting furnace.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Daiga (US 4,006,003) and Kunkle et al (US 4,632,687) disclose using solid fuel combustion to melt glass batch materials, whereby the fuel source is in contact with the glass.

Gross (US 6,436,337) discloses an oxy-fuel system that can utilize solid fuel and be used in the melting of glass.

Miller et al (US 3,969,068) discloses combustion of coal directly above a glass melt.

Motoi et al (US 5,285,735) discloses a method of controlling the injection of pulverized coal into a blast furnace.

Rachner et al (US 4,570,552) discloses a method of conveying coal or carbonaceous dust to a furnace having several combustion points.

Haftke et al (US 4,635,567) discloses a method of conveying a single source of pulverized fuel to several burners and controlling the combustion process through optimum delivery of fuel and air to each burner.

Heep (US 4,389,949) discloses a method of supplying pulverized fuel to a plurality of burners in a double regenerative furnace for burning lime.

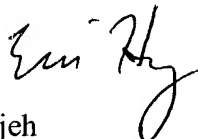
Lingl, Jr. et al (US 4,131,072) discloses a system for controlled delivery of solid fuel to a plurality of burners.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192. The examiner can normally be reached on Monday through Friday, 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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